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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,280	03/24/2004	Yoshitaka Sasaki	119199	4031

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OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

TUGBANG, ANTHONY D

ART UNIT	PAPER NUMBER
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3729

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/807,280

Applicant(s)SASAKI ET AL. C**Examiner**

A. Dexter Tugbang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/7/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because the content appears to be greater than 150 words. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Daby et al 6,683,749.

Daby discloses a method of manufacturing a thin-film magnetic head comprising:
forming a first magnetic pole layer (e.g. 12, in Fig. 12A); removing both sides in a track width

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direction of the first magnetic pole layer so as to leave a predetermined residual area in the first magnetic pole layer (see Figs. 12B and 12C); forming an insulating layer (e.g. 44 in Figs. 14A-14C) about the residual area of the first magnetic pole layer; forming a gap layer (e.g. 16 in Fig. 15C) made of a nonmagnetic material (e.g. alumina) on the residual area of the first magnetic pole layer and the insulating layer; forming on the gap layer, a second magnetic pole (e.g. 14) magnetically connected to the first magnetic pole; and patterning the second magnetic pole layer by etching while using a mask (col. 8, lines 37-44).

Regarding Claim(s) 2, Daby teaches that the insulating layer 16 is formed of alumina, which is the chemical formula of Al_2O_3 . As extrinsic evidence, the examiner cites Sasaki (U. S. Patent 6,278,580) to show that *alumina* has the chemical formula of Al_2O_3 (see col. 2, lines 20-21).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Daby et al in view of Schultz et al 5,640,753.

Daby discloses the claimed manufacturing method as relied upon above in Claim 1.

Daby does not mention that the residual area is 2.0 μm in the track width direction.

Schultz suggests that magnetic heads having a width (e.g. track width) of a residual area in the first magnetic pole can be 2.0 μm (col. 5, lines 20-26) for the purpose of achieving the very same magnetic recording characteristics.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the width of the residual area of Daby in the first magnetic pole layer, to the specific width taught by Schultz (e.g. 2.0 μm), to positively achieve the same magnetic recording characteristics of the magnetic head.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Daby et al in view of Sasaki 6,278,580.

Daby discloses the claimed manufacturing method as relied upon above in Claim 1, further including that the insulating layer (e.g. 44) is formed on both sides in the track width direction of the residual area. Daby does not mention that the first magnetic pole layer is constructed by laminating a plurality of magnetic layers where the topmost layer is formed with the residual area.

Sasaki shows that a first magnetic pole layer can be constructed by laminating two magnetic layers (bottom pole chip 41 and bottom pole 26 in Fig. 18B) where a residual area is formed in the topmost magnetic layer (e.g. 41). One such advantage in forming the first magnetic pole layer by laminating at least two magnetic layers is that this allows a manufacturing method that has excellent characteristics in good liability and efficiency (col. 5, lines 4-7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the first magnetic pole layer of Daby by forming the first magnetic

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pole layer by laminating two magnetic layers where the topmost magnetic layer forms the residual area, as taught by Sasaki, to advantageously provide a manufacturing method that has excellent characteristics and good liability and efficiency.

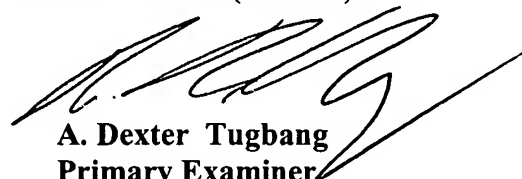
Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Dexter Tugbang whose telephone number is 571-272-4570. The examiner can normally be reached on Monday - Friday 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


A. Dexter Tugbang
Primary Examiner
Art Unit 3729

April 13, 2006